

CLAIMS

1. A hydrocarbon material, which is prepared by heat-treating a polysaccharide-based raw material with a thermal reaction auxiliary under an inert gas atmosphere, the hydrocarbon material having the following properties:

- (a) hydrogen/carbon (atomic ratio) of 0.05 to 0.5;
- (b) a specific surface area, measured by the BET method, of 600 to 2000 m²/g;
- (c) a mesopore volume, measured by the BJH method, of 0.02 to 1.2 ml/g;
- (d) a total pore volume, measured by the MP method, of 0.3 to 1.25 ml/g;

and

- (e) a bulk density of 0.60 g/ml or higher for an electrode obtained using the hydrocarbon material.

2. A hydrocarbon material according to Claim 1, wherein the polysaccharide-based raw material has an oxygen concentration ranging from 25% to 50%.

3. A hydrocarbon material according to Claim 2, wherein the polysaccharide-based raw material with an oxygen concentration ranging from 25% to 50% is prepared by oxygen crosslinking or deoxygenating a polysaccharide-based raw material.

4. A hydrocarbon material according to any one of Claims 1 to 3, wherein the polysaccharide-based raw material is a cellulose-based material and/or a starch-based material.

5. A hydrocarbon material according to Claim 4, wherein the cellulose-based material is at least one selected from the group consisting of a coconut shell, wood flour, and fruit husk or seed.

6. A hydrocarbon material according to Claim 4, wherein the starch-based material is at least one selected from the group consisting of grain and its ear axis.

5 7. A hydrocarbon material according to Claim 1, wherein the thermal reaction auxiliary is zinc chloride.

8. A method for preparing a hydrocarbon material comprising the following steps of:

- 10 (a) subjecting a polysaccharide-based raw material to oxygen crosslinking or deoxygenation, thereby preparing a polysaccharide-based raw material with an oxygen concentration ranging from 25% to 50%; and
- (b) heat-treating the polysaccharide-based raw material with an
15 oxygen concentration ranging from 25% to 50% together with a thermal reaction auxiliary under an inert gas atmosphere.

9. A preparation method according to Claim 8, wherein the amount of the thermal reaction auxiliary is about 0.3 to about 2.0 times the
20 weight of the polysaccharide-based raw material.

10. An electrode comprising a hydrocarbon material of any one of Claims 1 to 7.

25 11. A method for manufacturing an electrode, comprising mixing a hydrocarbon material of any one of Claims 1 to 7, carbon black, and a binder, and then forming the mixture.

12. An electrode manufactured by the manufacturing method of Claim
30 11.

13. A capacitor provided with an electrode comprising a hydrocarbon material of any one of claims 1 to 7.